US Army Corps of Engineers

HEADQUARTERS
CIVIL WORKS & MILITARY PROGRAMS

ENGINEERING & CONSTRUCTION NEWS

VOLUME II NUMBER 5 FEBRUARY 2000

FEBRUARY'S THEME:

Professionalism and National Engineer Week

DWIGHT'S NOTES

On Friday, January 28, 2000, the Chief of Engineers, LTG Joe Ballard, announced a major restructuring of the Headquarters, U.S. Army Corps of Engineers. The Chief's intent was to better align HQUSACE to changes already underway in districts and MSC's. Several HQ offices (i.e. Corporate Information and Real Estate) announced changes that will focus their efforts on supporting Civil Works and Military Programs. For Engineering and Construction the reorganization will combine the current Engineering and Construction Division in the Office of Deputy Commanding General for Military Programs and the Engineering and Construction Division in the Office of Deputy Commanding General for Civil Works. In addition the new E&C's mission was expanded to include environmental technical policy and technology integration. I was tapped to serve as the Chief of the new E&C, a job in which I feel I can make a difference for the Corps.

The Chief also announced that the new E&C would have its primary duty station in the Kingman Building at the Humphrey's Engineer Center near Ft. Belvoir, Virginia. Baltimore District is in the midst of hiring a design-build contractor to perform an extensive renovation of the third floor of the Kingman Building to serve E&C. Electronic communications between the Kingman and the GAO buildings will be seamless. A small group of E&C employees will still be stationed at the GAO Building to ensure full support to the rest of HQ is maintained. As time goes on I need to share the details of the new E&C to help you understand our intent and for me to understand how we can best serve you. We will be a smaller organization, yet cover a lot of ground in the technical policy and technology transfer areas. We'll be the single HQUSACE voice for a wide range of engineering, construction, environmental, and scientific matters. We plan to complete the staffing and physical moves by 1 September 2000. We've begun building the team already.

It is fitting that this month's theme is Professionalism, because the reorganization and move will require our personnel to perform as true professionals.

National Engineer Week is an opportunity to tell our story to the public. I encourage each district to maximize the number of public speaking events during the month and to work with the local high schools, colleges, and universities in telling the story of role that Engineers play in our nation today. . . I would like to specially thank John Breilling for providing us a look at how the Corps has influenced the history of the space program and to congratulate him on Maureen successful satellite launch. The articles that follow in this edition speak well for the great professionalism of the Corps.

DWIGHT'S NOTES (CONTINUED)

In closing I would like to thank Charlie Hess for serving as Acting Chief, Engineering and Construction Division, Civil Works, during the period November 1999 through January 2000. Charlie and the terrific leaders in Civil Works E&C kept the division on a straight course. Now it my turn to do what I can for our great cause . . .The U.S. Army Corps of Engineers.

(Editors' note: If you want to share your thoughts with our readers regarding Dwight's Notes send an email to the E&C News editor (charles.pearre@usace.army.mil). A synopsis of your comments will be published in the next issue.)

ARTICLES

THIS PUBLICATION WILL BE ISSUED ON A MONTHLY BASIS AND DISTRIBUTED BY E-MAIL AND POSTED ON THE INTERNET AT HTTP://WWW.HQ.USACE.ARMY.MIL/CEMP/E/CEMP-E AND HTTP://WWW.USACE.ARMY.MIL/INET/FUNCTIONS/CW/CECWE/NOTES. IF YOU WOULD LIKE TO CONTRIBUTE ARTICLES OR HAVE SUGGESTIONS FOR FUTURE ARTICLES, PLEASE CONTACT CHARLES PEARRE, CECW-EP, 202-761-4531.

Professionalism and National Engineer Week

NATIONAL ENGINEERS WEEK 2000

The engineering profession celebrates National Engineers Weeks 2000, ***Engineers Turning Ideas into Reality***, from 20-26 February 2000. This will be the 50th annual celebration of National Engineers Week. We have accepted the invitation from this year's co-chairs, American Consulting Engineers Council and CH2M HILL, to join the 2000 National Engineers Week All Star Team. During this week, engineers across the nation are making a special effort to help millions of high school students discover practical applications of math, science, and technology through hands-on activities. The event gives us the opportunity to participate in scheduled activities, which help increase public understanding of the engineering profession.

Engineering is a profession based on problem solving and solutions. And now, more than ever, we need creative and innovative thinkers to help meet the needs of a rapidly changing world. As we become a more global economy, we anticipate many new opportunities to help public and private entities design and build the infrastructure necessary to sustain a growing world population. In addition, many developing countries aspire to build their economic strength and improve their quality of life, which is fueling an increased demand for products and services around the world.

Engineers are America's problem solvers. They are practical inventors who use science and technology to turn ideas into reality, making our lives easier, healthier, more productive and more fun. Thanks to engineers you can…Cruise down your local superhighway paved with information or asphalt…Bite into a fresh tomato in February or take a megabyte of your favorite computer program…Run in the latest sports shoes and then run clean tap water for a refreshing drink. Every day everyone benefits from the work of engineers. Engineers design, build, manufacture, research and develop products, structures and machines. They are members of the U.S. Congress, chief executives of major corporations and government agencies and even television personalities. There are more than 1.9 million engineers in the U.S., according to the Bureau of Labor Statistics. Yet, their quiet, behind-the-scenes work has earned engineering the title of "the stealth profession." National Engineers Week brings recognition to this important profession.

The Greatest Engineering Achievements of the 20th Century will be announced at a National Press Club luncheon in Washington on Tuesday, February 22. This project marks a rare collaboration between the National Academy of Engineering (NAE), National Engineers Week, and more than 60 professional engineering societies, which were asked to submit up to 15 nominations each. An anonymous panel of NAE members from various engineering disciplines will choose the 20 most outstanding engineering achievements, with an emphasis on the significance of the achievement in terms of its impact on the quality of life in the 20th century.

The Headquarters celebration of Engineer Week is scheduled for February 24, 2000. We have invited students of Paul Laurence Dunbar Senior High School (our partners in education) to participate in the event and speak with our senior managers of the Civil Works, Military Construction, and Research &

Development programs. The students will also have a tour of the ongoing Pentagon Renovation Project. The web site http://www.eweek.org/ contains more information on the nation-wide celebration of National Engineers Week.

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PROFESSIONALS HONORING PROFESSIONALS

Smiling out at the world from the cover of the fourth quarter 1999 issue of ***World*** magazine is Dr. Ed Middleton, P.E., Chief, Engineering Division, Jacksonville District. Ed is smiling because he has just been awarded the 1999 Lifetime Achievement Award, one of the highest honors of Bentley Systems Inc.'s Proactive Engineering Success Awards program. Having known Dr. Middleton for a number of years, his selection for such a high honor is long over due. What makes the award extra special is that is was awarded by industry to a member of the Corps of Engineers. You are encouraged to read the article entitled "A Career Saluted" in ***World*** magazine. The article is posted at http://www.eemworld.com/q499/lifetime.htm on the Internet. Another article about the honor Ed received was published in ***SAME's NEWS***, February 2000. The SAME article is reproduced for your information in this issue of the Engineering and Construction News (Ed Middleton Honored).

The Washington Post of the Society of American Military Engineers (SAME) honored two individuals from Engineering and Construction Division, Civil Works, at their annual awards banquet on January 31, 2000. The annual awards for Outstanding Contributions to the Engineering Profession went to Mr. Robert A. Bank, General Engineering Branch, and Mr. Bruce C. Riley, Structure, Power, and Machinery Branch. Additional information concerning these awards was included in the January 2000 issue of the Engineering and Construction News and is available at http://www.usace.army.mil/inet/functions/cw/cecwe/notes/.

During Engineer Week, the National Society of Professional Engineers honors one engineer as the Federal Engineer of the Year. The top ten finalists for the award have been announced and the Corps of Engineers has two individuals in the top ten. LTC Larry McCallister from the Europe District and Dennis Norris from the Vicksburg District will be recognized for their achievements at the annual Federal Engineer of the Year awards luncheon on 24 February 2000. See additional information about the Federal Engineer of the Year in this issue (Federal Engineer of the Year Award).

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WOO HOO! MY SATELLITES LAUNCHED!!!

Friends and Fellow Corps colleagues:

When I received the following message from my daughter at 7:26 P.M. on 26 January 2000 and it started me thinking about engineering successes.

> *"Woo Hoo! My satellites Launched!!!"*
>
> *"As of 4:03am France time. 7:03pm Pacific Coast Time. The Artemis Satellites launched from the Vandenbourg Space Port on the Minuteman II launcher!!!!"*
>
> *"Picos in Space!!!!!!!!!!!!!!!!!!!!!!!!!!   Cheers,   Maureen"*

I'd ask you to take a moment to reflect on past achievements of the Corps and to rejoice with me on a significant new success in our Nation's 55-year-old space program, especially since many of us have been a part of the national effort at some point over the last 5 decades.

Most of you aren't electrical engineers who build little electronic boxes, and most of you have probably forgotten that Portland District (especially our construction GQAR folks) helped Los Angeles District around 20 years ago build the Vandenberg AFB space launch facility.

But at 7:03 p.m. PST last night, a shoebox-sized container of Pico (very small) satellites, many of whose parts sat around my house during the 1998 Christmas vacation, was launched into space from the facility we helped build 20 years ago.

What's very special about this Pico satellite Artemis project is several factors:

a) Some of the commercial satellite companies said they couldn't be built and wouldn't work!

b) NASA set up a project nearly 2 years ago with a team of 6 undergraduate engineering students-all ladies from several different engineering disciplines (electrical, computer, mechanical) -- at Santa Clara University and a team of graduate students at Stanford University to build these Pico satellites and a launcher vehicle. The Stanford students built the launcher vehicle (about the size of a shoebox), and the SCU students built the Pico satellites (whose mission is to observe, sample, and broadcast back data on high altitude VLF frequency events). The project was funded from grants from a variety of student and alumni organizations plus other friendly sources. The SCU student leader was/is my third daughter-engineer, Maureen. (The first 2 are civil engineers.)

c) The student groups out-performed the one or two commercial companies who also competed in building Pico satellites. The students were faster, cheaper, and better. Part of the reason is that the team of students worked on this project through vacations, breaks, and for very long days and nights for about 18 months before they graduated last June 1999. Problems with launch vehicles have delayed the launch of these satellites since their original scheduled September 1999 launch date. (This launch carried a variety of space projects besides Artemis Pico satellites.)

d) In the process of working on this project, the SCU and Stanford students and their faculty mentors have built up a cooperative educational network between the SCU undergraduate engineering school and the Stanford graduate engineering school that is continuing to serve to promote engineering education and even more advanced student engineering projects for NASA, USAF, USN, and other federal agencies. One of the other successful projects was a submersible vehicle used successfully for Antarctica deep-sea exploration this past year.

e) The team of lady engineers is also unique. Two of the members are from countries where women's status normally precludes such work: Egypt and Taiwan. (This may change in Taiwan: this project was front-page news in Taiwan.) The other 4 represent Oregon, California, and the Midwest. They represent the first undergraduate student team to accomplish the task of building a set of Pico satellites for NASA.

f) Pico satellites are the new economy space research wave of the future, as NASA budgets get

more and more trimmed. They're basically rugged metal structures with microcircuitry - designed and tested to make sure that they will perform in the challenging space environment.

One of very "modern" aspects of launch was that through Internet, a worldwide hookup of students, scientists, and supports was made to observe the launch over Internet. Real time dialogue and video was exchanged. My daughters at Santa Clara University and at the International Space University in Strasbourg were linked with their NASA, TRW, Stanford, and Air Force colleagues, as well as other interested folks like parents.

Many of you, like myself, have also worked on Corps, NASA, other Army, Navy, and Air Force space programs as part of your federal careers. With a couple of Navy exceptions, the Corps has built virtually all of this Nation's space facilities, including sites outside CONUS. When writing about Corps involvement with space and NASA, many Corps colleagues have worked on various space projects. My Los Angeles and San Francisco attorney colleagues Steve Temmel, Roman Zawadski, and John Eft were all involved in Vandenberg-related stuff. Merry Goodenough, who left us for Coast Guard in December 1999, was a former NASA contracting officer on East Coast NASA projects, prior to being a lawyer in John Eft's office. And I can't begin to count numbers of engineers and construction folks in Corps who have worked on various space projects.

I get reminded of just how long I've been around when I think of space projects and launch facilities. Thanks to Sputnik, Oct. 4, 1957, our generation studied space all the way through college and grad school, and when the Navy let me into their aviation program, space was one part of it from the start. Unfortunately, I still can't discuss the classified stuff I worked on -- but it was and is every bid as exciting as the unclassified peaceful use of space -- especially since I was in one of the operational units involved in field activities.

Certainly, one of the high points for many of you and me was 30-1/2 years ago when the Apollo Moonlander put our first human foot on the moon. As a member of the Navy's Pacific carrier forces and its most classified electronics reconnaissance squadron, we had a very special part in support of the Apollo missions, including the recovery of Apollo capsules from Pacific Ocean landings.

It's easy to get bogged down in the daily details of our work, and forget just how much good we do and how much we pioneer for our country and the world. Even though I work as a lawyer, I'm still an R&D engineer/project manager and Navy flier at heart - still seeing the world in terms of missions and projects to be done -- an new opportunities to be taken and used for the good of all. Even more awesome is the huge distance in science and technology we have come since my parents were teenagers in the early 1920's - working on the early Model T Fords and biplanes. They're both dead now, but engineering, technology, and construction have been an ingrained part of our family's heritage for 3 generations now. And my grandkids are growing up exposed to the same creative influences and encouragement!

So, as we pursue our regular job tasks and lives, let us take a moment to rejoice that America is still doing good things in space with the facilities that the Corps built, and that another generation of Americans is stepping out in the footsteps of those of us who have been at this business for decades.

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ED MIDDLETON HONORED

SAME member, Edward E. Middleton, Ph.D., P.E., Chief of the Engineering Division at the Army Corps of Engineers, Jacksonville District, has been awarded the 1999 Lifetime Achievement Award, one of the highest honors of Bentley Systems Inc.'s Proactive Engineering Success Awards program. The award was presented to Middleton in recognition of a career filled with outstanding accomplishments, his highly regarded reputation, and his dedication to improving engineering techniques through the use of ever-evolving advanced technology.

Dr. Middleton was among the earliest advocates of the use of CAD technology in the Corps, and has remained committed throughout his career to the use of higher engineering technologies for the advancement of engineering efficiency and productivity. Given his uncanny ability to get the entire Army Corps of Engineers technologically on-track, the Corps uses a wide array of sophisticated technology for its innovative and critical projects, including MicroStation/J, MicroStation Descartes and MicroStation GeoCoordinator.

"You have been the driving force behind the Corps successful use of engineering technology for over 15 years. Congratulations on a rightfully deserved."

John Kincaid
Civil Engineer and CADD Manager
Army Corps of Engineers Rock Island District

Dr. Middleton began his career in the Corps at the St. Louis District, where he remained for 20 years. His titles throughout his career have included assistant chief, Design Branch; chief of Information Management; chairman of the CADD Evaluation Team, from 1984 to 1987; and, chief of the Computer-aided Engineering Division. Middleton became Chief of the Engineering Division in the Jacksonville District in 1990. He is also the chairman of the Senior CADD Advisory Committee.

As chief of the Jacksonville District's Engineering Division, Dr. Middleton is in charge of an annual budget that exceeds $300 million. The engineering division encompasses more than 200 civil engineers and works with a budget of $42 million.

The Jacksonville District is the second largest civil works district in the nation (including all of Florida and Puerto Rico) and maintains an extremely complex system of flood-control works. The region's system of harbors is one of the largest in the country. The district operates and maintains approximately 60 different navigation projects, including 16 deepwater ports, 30 navigation locks and over 2,100 miles of inland waterways. In addition, the Jacksonville District heads one of the most aggressive environmental restoration programs in the world.

"Congratulations from the South Atlantic Division and the entire U.S. Army Corps of Engineers for the honor that Bentley has bestowed upon you.

"It comes as no surprise to us, however, that such recognition has come your way. Whether at the St. Louis District, the Waterways Experiment Station or the Jacksonville District, your contributions to integrating computer technologies within the Corps were clearly groundbreaking. Change does not come easily and this is particularly so in an organization as large as the Corps. Your vision and perseverance were vital to the organization's ability to transition from the tried, proven and comfortable drafting board to the untried and emerging technology. The results have been remarkable.

We have been able to harness and enjoy the substantial benefits that have resulted in more efficient and much higher quality products for our customers.

"You are clearly most deserving of this prestigious recognition and we are all exceptionally proud of your accomplishments! Congratulations, once again, from all of us."

J. Richard Capka
Brig. Gen., U.S. Army
Commander, South Atlantic Division

Corps projects are often designed for multi-purpose uses, such as storage of water for municipal and industrial use, navigation, irrigation, shore protection and restoration, development of hydroelectric power, environmental restoration of formerly used defense sites, conservation of fish and wildlife, recreation, and support to the military and others.

One recent example of such progressive techniques was the highly innovative grouting procedures used during the construction of the Portuguese Dam, near Ponce in southern Puerto Rico. The dam is a double-curvature, thin-arched structure 1,500feet long across the crest, 270-feet high, 44-feet wide at the base and 1 2-feet wide at the top. Its reservoir will provide 24,200 acre-feet of storage or I 1.1 million gallons of water per day.

Another example of the work performed under Middleton's leadership is the Kissimmee River project, which includes 3,000 square miles between Orlando and Lake Okeechobee in central Florida. The ecosystem of this historic floodplain was restored to re-establish wetlands. The project was budgeted at $518 million.

"You have been a leader in the Corps of Engineers Computer Technology community for years, and a strong voice for innovation as well as standardization. You have been a visionary, a voice for practical solutions and a mentor to many of your engineers.

"This award is richly deserved. Please accept my congratulations. "

Brian Doyle
Chief of Engineering Division
Army Corps of Engineers, Sacramento District

As one of four nominees for this award, Middleton was chosen by upper management of Bentley Systems. The Lifetime Achievement Award recipient embodies the gains of the collective professional community, achieved through the vision of one honored individual. Historically, the award is given to a member of the engineering community whose achievements over the course of his or her career have impacted positively the entire industry. The award recognizes more than the use of technology for the gains of an enterprise, it reflects a vision of strong organizational direction, the drive for excellence through continuous progression and a career-long record of extraordinary achievement.

Created by Bentley Systems Inc. in 1996 to bring recognition to some of the world's notable engineering organizations that use Bentley products, the Proactive Engineering Success Award's program honors industry leaders who have reached the pinnacle of performance in engineering information technology (IT) to create today's most impressive engineering projects. Winners of the Bentley awards are announced during its annual Bentley International User Conference.

Middleton reflected on the evolution of engineering technology upon receiving the Bentley 1999 Lifetime Achievement Award:

"I am honored to receive such a prestigious award and am equally honored to share this recognition with the many outstanding engineering professionals from the U.S. Army Corps of Engineers who are utilizing engineering software to benefit the nation.

"I would like to express my gratitude to the original team I chaired, which moved the Corps into CAD technology, and to some of our organizations' other automation pioneers. I feel that I rightfully share the Lifetime Achievement Award with these individuals. I was fortunate in my career to have leadership positions that enabled me to move to use of automation forward. At the same time, I was pleased to see my coworkers promoting the technology at Corps facilities throughout the world. I had the opportunity to speak with several members of the Corps of Engineers attending the conference and enjoyed discussing their use of engineering software. These are the second generation of CAD users and I was as proud of them as they appeared to be of me.

"I believe the Corps to be an evolving organization. It is staffed by dedicated professionals who strive to be the best they can be. In so doing, they advance their profession as well as the organization's performance. The Corps has historically sought new technology and has consistently modified its way of doing business to better accomplish its work.

"I am proud to be a member of the U.S. Army Corps of Engineers. The Corps, and its Architect Engineer partners, provides a valuable service to the nation during peace as well as during war. I have worked on flood protection projects that were tested and saved untold damage. I participated in the Hurricane Andrew emergency operations cleanup, and am presently involved in the environmental restoration of the South Florida ecosystem. This is a great time to be an engineer and the Corps is a great place to work. "

Edward E. Middleton Ph.D., P.E.
Chief of Engineering Division
Army Corps of Engineers
Jacksonville District

This article was reprinted by the ***SAME's NEWS***, February 2000, with permission from the editor of that newsletter. Readers of the Engineering and Construction News are encouraged to obtain a copy of the SAME's NEWS from a member of your local SAME Post and read the other interesting items in the February issue.

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FEDERAL ENGINEER OF THE YEAR AWARD

In December, USACE submitted two nominees to receive the Federal Engineer of the Year Award (FEYA). This annual award is sponsored by the National Society of Professional Engineers (NSPE). USACE was allowed to nominate one military and one civilian engineer. A USACE selection panel selected LTC Larry McCallister from the Europe District and Dennis Norris from the Vicksburg District, as the USACE nominees.

We were recently notified that LTC Larry McCallister and Dennis Norris were both selected to be among the Top Ten Finalists to receive the FEYA. The winner of the FEYA will be announced at the

awards luncheon where both Larry and Dennis will receive the USACE Federal Engineer of the Year award and special recognition for being among the Top Ten.

The awards luncheon will be held at 12:00 Noon on Thursday, 24 February 2000, at the Crystal Gateway Hotel, 1700 Jefferson Davis Highway, Arlington, Virginia. The cost of the luncheon is $35.00. Tickets should be purchased or reserved by 10 February 2000. The NSPE POC for reserving or purchasing tickets is Elaine Costello at 703-684-2884

Applications for the FEYA were received for fifteen other USACE engineers. These applicants also had excellent credentials; however, USACE was limited to two nominees. We want to thank those districts, divisions and laboratories that submitted applications. We wish to encourage their participation for next year's award.

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CHIEF OF ENGINEERS DESIGN AND ENVIRONMENTAL AWARDS PROGRAM

The Chief of Engineers Design and Environmental Awards Program recognizes outstanding design and environmental efforts accomplished by USACE activities working with contract A/E firms and construction contractors. Since the program was initiated in 1965, 429 USACE projects have received awards. The program this year will be judged in two major competition categories, Design and Environmental. The projects are judged by interdisciplinary juries composed of professionally recognized, outstanding members of their professions representing the disciplines of architecture, civil, mechanical, and electrical engineering; landscape architecture; interior design; urban design; environmental design; and planning. The judging criteria are Purpose, Leadership, Cost, Aesthetics, Performance and Partnering. Categories of awards are, in rank order, Chief of Engineers Award of Excellence, Honor Award, and Merit Award.

Judging of submissions is planned for 28-29 February 2000. LTG Ballard has indicated he would like to receive the jury's out-briefings on 29 February 2000. Winners are announced in a press release followed by a feature in the Engineer Update, probably the April edition. The primary product of the program is the design awards brochure, which is the basis for USACE marketing efforts.

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PURSUING REGISTRATION TO ISO 9001

In March 1995 the Louisville District Engineering Division agreed to participate as one of four engineering divisions in a pilot program to examine the applicability of the ISO 9001 standard to a Corps organization. HQUSACE contracted with Logistics Management Institute (LMI) to provide expertise and assistance for each of the four districts. In March 1997 CELRL-ED became the first USACE organization to achieve registration. Since that time, two other USACE organizations (Portland District Planning and Engineering elements, ISO 9001, August 1997 and Louisville District Construction Division, ISO 9002, Aug 1998) have also been registered. Both Louisville District elements (ED and CD) utilized ABS Quality Evaluations, Inc., to serve as the registrar for certifying compliance with the standard.

The scope of the CELRL-ED registration covers "the provision of engineering, architectural and environmental engineering services". The initiative to establish a quality management system in

compliance with ISO 9001 and prepare for registration was handled in the same manner as any other of the division's projects, albeit a major one; no staff member was dedicated on a full time basis. A project team was established that included a management representative, project manager, steering group, and several quality action teams. The Chief, Engineering Division appointed his Assistant Chief to be the management representative with responsibility and authority for establishing and maintaining the quality system and reporting on the system to executive management for reviews on system performance and opportunities for improvement. The assistant chief also served as the liaison with parties outside the Engineering Division on matters relating to the quality system. A Management Team was established which was chaired by the management representative and included the Chief, Engineering Division, all of the Branch Chiefs, the Chief of the Management Support Section, and the program manager. Eleven different quality action teams were formed to accomplish the task of documentation preparation; each team was chaired by one of the members of the Management Team. The main objective of the Louisville Engineering Division was to adopt the ISO 9001standard as a means to improve customer satisfaction through delivering consistently high levels of professional engineering design service at a competitive cost and in a timely manner.

The funding necessary to cover direct staff charges was simply a priority allocation of Engineering Division's annual overhead budget. It was budgeted and managed as a separate project account. Overhead costs in excess of the normal operating budget were approximately $200,000 spread over three fiscal years and costs for the registrar were $25,000 spread over the first three years of Engineering Division's registration. To merely cite these figures however without further clarification is misleading and paints an overly negative picture of the expense. Included in these costs were other quality initiatives being imposed by HQUSACE and CELRD that were incorporated into the same documentation effort. In addition, the District would have invested a large portion of these costs into other QC activities whether or not it was pursuing ISO registration. The bottom line was that CELRL-ED believed that pursuing registration made good business sense and as verified in the following discussion, benefits have far outweighed the initial investment.

The CELRL-ED quality management system has now been in place since mid 1996. Actual registration to the ISO 9001 standard occurred in March 1997. Our experience has been extremely positive; there have been numerous tangible improvements during this period. Performance measure trend analyses beginning in FY95 and continuing through the present reveal significant improvement in many areas. There has been a large reduction in controllable cost growth during construction. Customer satisfaction has continued to improve. Productivity has continued to climb without a corresponding decrease in quality. In fact just the opposite has been true; not only has productivity increased but also the quality of products being produced has improved. The District's program has continued to grow during this time period in spite of an overall reduction in Corps-wide programs. We feel that quality of engineering products has certainly played a role in this growth.

CELRL-ED makes no claim that all the tangible benefits discussed above are directly attributable to ISO 9001 registration, but evidence continues to grow that something significant has changed in the Louisville District. We believe that the new focus on quality within Engineering Division must certainly be considered a leading candidate for affecting these improvements.

The most significant intangible benefit has been the cultural change within Engineering Division. Staff are more aware of quality considerations and are very focused on assuring the customer receives the quality of product expected at the agreed upon schedule. Improvements in documentation have been dramatic; agreement with our customers concerning scope, schedule, budget, and quality expectations

are considered as formal contract agreements and are signed by both parties. This agreement is considered to be binding on both parties and can only be changed by amendment to the contract.

The Louisville District recommends registration. Preparations are already underway here in Louisville to register the entire Program Management Business Process (PMBP) under a single certification. This registration will include Louisville District elements of Planning, Program and Project Management, Construction, Contracting, Real Estate, Resource Management, Counsel, and Engineering. The PMBP registration will also have APIC requirements integrated into the same system. We are convinced it works and that the benefits outweigh the expenditure of resources required to achieve and maintain registration. As a word of caution however, we do offer the following concerns:

There is a cost and not just in dollars and cents. Management must be absolutely committed to this initiative. This responsibility can not be delegated to a lower level. Commitment must originate at the management level and then be permeated down through the remainder of the staff. This commitment level is absolutely critical; without it registration efforts will prove futile.

The second issue concerns whether or not the same benefit can be achieved without going through the registration process. CELRL-ED does not believe this to be possible. Without the incentive of the mandatory continuing audits, both external (by registrar) and internal, we do not believe the energy necessary to sustain continued adherence to the documented system would be maintained. The standard mandates continuing audits of the registered system in order to affirm continued adherence. Those elements within the Corps that are fostering a philosophy of ISO-Without-Registration will only reduce this initiative to just another program without the resultant culture change necessary to assure its success.

Plans are currently underway within the Great Lakes and Ohio River Division, to host a one-day workshop covering the ISO 9001 registration process. The workshop is primarily intended for CELRD but an informal survey of all Corps districts indicated some outside interest. At present seven districts plan to attend. Additional space may be available and interested Corps personnel are welcome to contact Mr. Larry Seals (CELRD-ET) for details, (513) 684-3034 or larry.seals@lrdor.usace.army.mil.

LMI continues to provide expert assistance to any Corps district interested in pursuing registration. HQUSACE maintains an indefinite delivery contract with LMI that is available to any district on a delivery order basis. The POC with LMI is Mr. John Cable, at e-mail (jcable@eng.umd.edu).

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AND GENE SOMMERVILLE, CELRL-ED, 502-582-6057

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District of the Month

NEW ENGLAND DISTRICT

The U.S. Army Corps of Engineers has a vision: To be the world's premier engineering organization. The New England District is striving to achieve that vision through its successful projects and its outreach to others. During National Engineers Week, the District will showcase the programs and activities that have built its reputation for excellence.

The six New England states cover 66,000 square miles, with 6,100 miles of coastline and thousands of miles of navigable rivers and streams. The terrain ranges from the rocky and jagged Maine coastline to the sandy shores of Cape Cod and from Vermont's rugged mountains to the breaking waves of the Atlantic. New England's natural features are truly a microcosm of America in terms of natural features.

The District takes great pride in the fact that it has provided service to the people of New England since June 16, 1775, when the U.S. Army Corps of Engineers was founded on the eve of the Battle of Bunker Hill. Today, as part of the North Atlantic Division headquartered in New York, the District continues to provide state-of-the-art-engineering services to New England and the nation. New England District's missions include flood prevention and control, emergency response for natural disasters and national emergencies, environmental remediation and restoration, recreation and natural resource management, the Regulatory program, streambank and shoreline protection, maintenance and improvement of harbors, and engineering and construction support to military units and other federal agencies, including Superfund work for EPA.

The New England District's flood control projects, which cost $538 million to construct, have prevented damages of over $2.8 billion to date. The District has provided this flood protection in the region's 13 major river basins through construction of 36 dams, 99 local protection projects and five hurricane barriers. The Corps in New England pioneered the building of hurricane barriers, building the Fox Point Hurricane Barrier – the first in the Nation -- in Providence, Rhode Island. Today, the Corps still owns and operates two of the five barriers (Stamford, Conn., and New Bedford, Mass.).

Navigation continues to be important to the economic well being of the region and the New England District plays a vital and necessary role. From the District's first effort to protect the harbor of refuge in America's hometown of Plymouth, Massachusetts, to today's navigation improvement project in Boston Harbor – one of two Hammer Awards received by the Corps in New England in 1999 – the District has improved and now maintains 11 deep water commercial ports and 102 recreational and small harbors.

The Cape Cod Canal, owned and operated by the District, is a 17.5 mile-long waterway. The widest sea level canal in the world, it is operated around the clock by traffic controllers and rangers. More than 16,000 vessels travel through the canal each year, including more than 8,200 commercial ships carrying 15.5 tons of cargo.

The District also operates recreational facilities at its flood control projects, including 23 picnic, boating, and swimming areas, as well as three campgrounds managed by the District and five campgrounds operated by state and private interests.

The District's Work for Others Program, especially its work for the Environmental Protection Agency's Superfund Program, has won many accolades. The District's second Hammer Award in 1999 was received for its work at the Charles George Superfund site in Tyngsboro, Mass. Bulk mail and annex facilities that were built for the U.S. Postal Service, and most recently, three lighthouses that were moved inland to save them from eroding shorelines for the U.S. Coast Guard illustrate the variety of the New England District's work for others.

Support to the military is a newly returned and much welcomed mission for the District. Under this program, the Corps provides support that varies from constructing hangars and runways to building barracks and family housing, to environmental restoration of military facilities and installations. All of the work is designed to support the soldier and airman in peace and war, and to provide facilities that enhance the quality of life for members of the military community.

The New England District is an advocate of innovative technology. Under the leadership of Dr. Ian Osgerby, substantial cost and performance accomplishments have been achieved in the HTRW Program area. They ranged from natural attenuation to enhanced bioremediation, to advanced oxidation using hydrogen peroxide and potassium permanganate. Innovative technologies contributed significantly to the Charles George Superfund Site Hammer Award.

Another innovative technique was used on Hodges Village Dam to stop a serious seepage problem. This was the first risk-based reliability analysis for a seepage rehabilitation project and prototype-cutting wheels were used for the first time to cut a trench into bedrock for a slurry wall.

Through its Public Involvement programs, the District earns, protects, and sustains the public trust. The citizens of New England associate the Corps' white construction hats adorned with the red Engineer logo with good government. It is a public trust with many responsibilities that the District is proud to shoulder.

The New England District is a very visible entity and often the subject of interest from various media, elected officials, and the public-at-large. Our range of operations and areas of engineering expertise often encompass sensitive and emotional issues which, if not carefully addressed, have the potential for causing embarrassing or other negative reactions from those we ultimately serve, the public.

The District reaches out to the public through informational programs founded on performance. One such program is the District's Speaker's Bureau. The Public Affairs Office maintains a database of District professionals who are prepared to present topics of interest to the public. These experts are available to address audiences on a variety of subjects, including archaeology, architecture, biology, environmental restoration, forestry, geology, hydrology, industrial hygiene, natural resource management, public affairs, regulatory issues and permitting procedures, sociology, surveying, water resources development, wetlands, and nearly all of the engineering disciplines. The Speakers Bureau program makes these professionals available to speak to clubs, educational institutions special interest groups and other organizations. Packaged audiovisual presentations and displays are also available for showing through this program. A brochure on the program that was sent to schools and special interest groups can be viewed on the World Wide Web at http://www.nae.usace.army.mil/publicac/bureau.htm.

The District's efforts to inform the public increases during Engineers Week. National Engineers Week 2000 with a special focus on minorities, women and youth, aims to reach the entire American public. New England District has made plans for its most ambitious National Engineers Week in the 49-year history of the event. Building on the theme of "Turning Ideas into Reality," the District's outreach activities will be focused on encouraging New England's young math and science students to realize the practical power of their knowledge and skills to meet the challenges of the new millennium.

In a cooperative effort with the Boston Society of Civil Engineers (BSCE), the District will implement a school visitation program that will send District engineers to various schools around the six-state region to talk to children about the profession of Engineering and the various missions of the U.S. Army Corps of Engineers. As part of the program, BSCE will furnish the Corps representatives with a 15-minute informational video to present at the schools**.**

In addition to the school visitation program, the District will also participate in the Engineers Week Career Night in Boston where District professionals will address a variety of topics and provide career-enhancing information to engineering and technical-based students. An informational booth will include the exhibit, "Your Corps in New England," which illustrates the many types of projects the District has managed in recent years. Brochures that explain the role of the Corps of Engineers will be

available as well as publications that describe current New England District projects. Ken Hitch, Chief of Engineering/Planning Division was a member of the board that determined the scholarships that will be presented during the Engineers Week luncheon.

For more information on specific District projects, please contact Mr. Hitch at 978-318-8500 or Mr. Richard Carlson, Chief, Construction/Operations at 978-318-8321. Those interested in learning more about the New England District may also visit its web site at http://www.nae.usace.army.mil.

POC'S: KENNETH HITCH, CENAE-EP, 978-318-8500
AND RICHARD CARLSON, CENAE-CO, 978-318-8321

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Reorganization News

HQUSACE ENGINEERING AND CONSTRUCTION REORGANIZATION

At a Town Hall meeting on 28 January 2000, LTG Ballard announced the plans for restructuring the USACE Headquarters. The purpose of the reorganization is to allow HQ to better support the field by eliminating stovepipe-type organizations and align similarly to field elements. This change will facilitate continued implementation of the Project Management Business Process and our One Door to the Corps philosophy.

The restructuring affects all HQUSACE elements. Significant changes to the Engineering and Construction element include:

- Consolidate the Military Programs and Civil Works Engineering and Construction Divisions, and placing the new organization within Civil Works.
- Assign Dwight Beranek as the Chief of the new Engineering and Construction Division effective 31 January 2000.
- Establish Special Assistants for Customer Support (one Civil Works and one Military Programs).
- Restructuring the Division into 4 Branches:
  - Technology Policy,
  - Water Resources,
  - Technology Integration, and
  - Infrastructure.
- Relocating the new Engineering and Construction Division into offices at Fort Belvoir, Virginia, with a forward element at the GAO Building.

A transition team, consisting of Don Dressler (CECW-E), Monhan Singh (CEMP-E), Charlie Baldi (CECW-EP), Ray Navidi (CEMP-ET), M. K. Miles (CECW-EP), Lawrence Delaney (CEMP-M), Art Walz (CECW-EG), and Robert Chasi (CEMP-EC) is currently developing the transition plan and details of the new organization. The projected date for completion of the consolidation is July 2000 and for completion of the move is September 2000. In the interim the members of both of the current division will be working together for a smooth transition. Additional information will be made available as it is finalized.

POC: BOB BANK, CECW-EP, 202-761-1660

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CORPS CIVIL WORKS PROGRAM DEVELOPMENT STRATEGIC PLANNING

Based on the direction and guidance offered by the Chief of Engineers, and proactively supported by the ASA(CW), the Corps has begun a strategic initiative to call attention to compelling national water resources challenges and their impact on our national prosperity, global competitiveness, sustainability and quality of life. The initiative represents a deliberate course change for the Corps toward a position of advocating for the need for greater investment in water resources infrastructure and management. The intent of the effort is to provide leadership in Federal water resources management and development by providing information about the challenges and their impacts, and what needs to be done to address them. The effort is being led by Mr. Fred Caver, Chief of CW Programs Management, and is being managed by the Corps' Institute for Water Resources.

The water resources challenges being presented include stresses on our national marine transportation system; coping with the effects of floods; the opportunity to leverage smart growth through water resources investments; mitigating the environmental consequences of past development; adequately maintaining our aging water resources infrastructure; and effectively responding to national disasters. In order to stimulate discussion about these issues a "join the dialogue" effort is underway to encourage stakeholders, other agencies, and the public to become involved. A brochure, and fact sheets are available, and a web site (www.wrsc.usace.army.mil/iwr/waterchallenges) is open. In addition, a series of regional "listening sessions" is being planned for the late spring and summer to continue the dialogue with interested parties.

The intended end result of the initiative is the focused development of the Corps civil works program to address key national needs together with sufficient resources to accomplish what is required. A strategic plan presenting the national needs, as well as goals and objectives and resourcing requirements is also currently under development, and will be revised and updated as the dialogue about national needs and the Federal role in addressing them proceeds.

For further information about the CW strategic initiative contact, Dave Kenyon, CECW-B or Mark Dunning, CEWRSC-IWR.

POC'S: DAVE KENYON, CECW-BD, 202-761-8575
AND MARK DUNNING, CEWRC-IWR-A, 703-428-6593

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Update

A JEWEL IN THE MAKING - FORT MCNAIR SMALL SITE CHAPEL

Currently being designed for the "college campus " setting of Fort Lesley J. McNair is a small site chapel to support the religious needs of all the major faiths found within the Army family and the military, college, and local community served by this installation. Fort McNair is a 98 – acre Army installation located in Southwest Washington, DC and is bounded by the Washington Channel on the west and the Anacostia River on the south and southeast. Fort McNair's major activities are the National Defense University, the Interamerican Defense College and Headquarters, U.S. Army Military District of Washington (MDW). Other activities on the installation include an "Old Guard" company, a contingent of military police, an ordnance detachment and housing for 16 General Officers.

The chapel design is being developed in partnership between the Corps of Engineers' Baltimore District, the Military District of Washington and the architecture firm of the Hillier Group. The program requirements for the chapel are based on the Department of the Army small site chapel standard; however, the footprint for the chapel is not.

Fort McNair was master planned by the architectural firm of McKim, Mead, and White at the beginning of the 20th century. This firm also designed a number of buildings on the installation. The design and siting of the chapel will be in keeping with the character defined by the installation's historic structures and the master plan. The design concept will be formally submitted for review consultation and approval by the District of Columbia Historic Preservation Office, the Advisory Council on Historic Preservation, the National Capitol Planning Commission, and the Commission of Fine Arts.

POC: AL YOUNG, CEMP-ED, 202-761-0435

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SUSTAINABLE DEVELOPMENT FOR MILITARY FACILITIES

Recent Executive Orders require Federal agencies to incorporate sustainable development in all their facilities. Our ETL defines it as "The design, construction, operation, and reuse/removal of the built environment (infrastructure as well as buildings) in an environmentally and energy efficient manner. Sustainable Design is meeting the needs of today without compromising the ability of future generations to meet their needs". To meet the requirements of Executive Orders, DOD developed a training course to facilitate Services' implementation of these principles. This training course will be used to train USACE Districts, Army installations and MACOM's. ETL 1110-3-491 is being revised and will recommend that all new designs strive to achieve, at a minimum, Bronze level as defined by the LEED (Leadership in Energy and Environmental Design) Green Building Rating System. We are working with Army staff to encourage installations to incorporate sustainable principles into their programming and planning activities of Military facilities.

POC: HARRY GORADIA, CEMP-ET, 202-761-8622

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CADD/GIS TECHNOLOGY SYMPOSIUM AND EXPOSITION 2000

The CADD/GIS Technology Center is pleased to announce the fourth Symposium and Exposition! This year's Symposium will be held at the Adam's Mark Hotel in St. Louis, Missouri the week of May 22-25, 2000. Reflecting changes in the mission of the Center, this year's Symposium will be sponsored by 12 Federal agencies. With over 100 exhibition booths, highlighting the latest technology and achievements in CADD, GIS, and FM, and workshops covering the latest Center standards efforts, this year's Symposium is guaranteed to surpass all others! Registration for either attendance or exhibit booth reservations can be made at the CADD/GIS Technology Center's web page at http://tsc.wes.army.mil/Center_Info/symposium/2000/.

The Center is also looking for presenters at the Symposium. The four primary areas of focus for paper topics will be Technology, Applications, Data Management, and Design Engineering. The Center is requesting abstracts for consideration by February 25, 2000. For more information on the four focus areas, and online abstract submittal, please visit the Symposium web page.

POC: NANCY BLYLER, CECW-EP, 202-761-8893

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SATELLITE SAVES SIMOLEONS

Painted Rock Dam, located on the Gila River in southwestern Arizona, impounds a reservoir of nearly 2.5 million acre-feet at its spillway crest. Although it is normally empty, storms in 1993 more than filled the reservoir, causing water to pour over its spillway. In addition to all the immediate problems associated with this very rare event, the staff in the Los Angeles District's Reservoir Regulation Section had another problem: sediment deposition. Large amounts of sediment-laden water had entered the reservoir during the storms, but the water that left the reservoir over the spillway and through the outlet works had been almost sediment-free.
Obviously, a lot of material had been deposited in the reservoir – by one estimate as much as 500,000 acre-feet. A new relationship between water elevation – the altitude of the water level – and reservoir storage had to be developed. Los Angeles usually accomplishes this by doing a reservoir survey. The pool area at Painted Rock, though, covers about 140 square miles, and the best price the district could get for survey work was nearly $700,000.

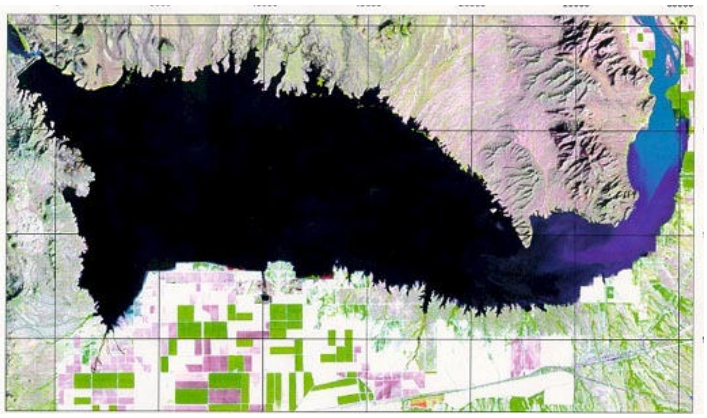
Brian Tracy, the district's Reservoir Regulation Section chief, went to see Steve Dwyer, the Operations Branch chief about getting the money. "Steve was polite," said Tracy. "He didn't laugh out loud or throw me out of his office, but he made it clear that he didn't have that kind of money laying around." Tracy was forced to think of something else. "I remembered a few things from other places I've worked in the district." When he worked in the Hydraulics Section, he saw how the physical modelers at the Corps' Waterways Experiment Station in Vicksburg, Mississippi, went about determining the contour lines for scour holes when they did moveable-bed model studies.

After a test was complete, they needed a way to document the results. In the model, they set the gate at the downstream end at a given elevation to create a pool of water at that same elevation. Then they laid a piece of rope around the edge of the pool. They repeated this exercise at various elevations, each time laying rope at the edges. The result, when seen from above, was a contour map of the scour hole. "Whoever drew the short straw would be sent up into the rafters of the building with a camera to take a picture looking straight down at the contour lines."

The other thing Tracy remembered came from working on the National Dams Inventory project when he was an intern. It was an exercise that matched computer printouts of satellite images to U.S. Geological Survey topographic sheets in an attempt to find undocumented dams throughout the country. "What I remembered from this exercise is that, rain or shine, day in and day out, a LANDSAT satellite is collecting images of the earth's surface, and that at some regular interval it passes over every point in the country."

Because the Painted Rock Reservoir is very large, it took several months to drain it. As it was being drained, a satellite passed over the reservoir every 16 days and on each trip it faithfully recorded a high-altitude image of the decreasing pool of water behind the dam. Theoretically, it would be possible to obtain from each image a contour line and surface area for the elevation on that particular day in the changing topography of the basin. With enough surface areas, it would be possible to develop a new elevation-versus-storage relationship – without having to collect any additional data.

All this seemed like an ideal application for using remotely sensed satellite data and a Geographic Information System, or GIS. A GIS is a database that references data by physical location. Although a GIS is relatively easy to use once it has been set up, the design of a database and the entry of data is a specialized skill that the Reservoir Regulation Section in Los Angeles did not have. The district called



Enlarging the satellite image to a 1:100,000 scale gives a better view of the large area the reservoir covered after 1993's heavy rains, unusual in the arid Sonoran Desert country of southwestern Arizona. At this point, some 95 miles southwest of Phoenix, the Gila ("hee-luh") River (top right) enters the reservoir from the east, then flows southwest 126 miles to join the Colorado River at Yuma. Temperatures in the area vary from freezing winter nights to 120-degree summer days.

on the Corps' Remote Sensing/GIS Center at the Cold Regions Research Engineering Lab (CRREL) in Hanover, New Hampshire, for assistance. "Tim Pangburn at CRREL told us that what we wanted to do was feasible. We sent them some money, and they assigned Emily Bryant, Robert Bolus and Greg Pedrick to do the work."

Using the funds Los Angeles sent, 19 LANDSAT images were purchased from the USGS Earth Resources Observation System (EROS) data center in South Dakota and registered to a known map projection. Each image defined the surface area at one elevation of the reservoir pool. Once Bryant figured out a way for the software to distinguish between water and land, the rest was just adding up the areas and calculating the amount of storage remaining in the reservoir.

Although the resulting product was not as accurate as that of a conventional survey, it was possible to obtain it with available resources and it was much better than working with completely obsolete data. "We were very pleased with the results, both because we had saved well over $600,000, and because of the answers we received. It turned out that we had not lost nearly as much storage as we had feared. The actual storage loss turned out to be about 157,000 [of the 2.5 million] acre-feet," Tracy said. "Painted Rock Dam was an ideal application for this technique. Arizona usually has clear weather, so the EROS data center had a lot of good satellite images. Also, the resolution quality of the LANDSAT images didn't matter too much because the pools were so large. The other nice thing is that all we had to do is come up with the idea. After all, the LANDSAT satellites have been collecting these images since 1972."

(More information and photographs are available on the Army Corps of Engineers' Los Angeles District web site at http://www.spl.usace.army.mi. *Click on the Reservoir Regulation page, then General Information on Los Angeles District's Reservoirs, scroll down to Lower Colorado River Drainage Basin, and select Painted Rock Dam.)*

POC: BRIAN TRACY, CESPL-ED-HR, 213-452-3527

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JOB OPPORTUNITY - MECHANICAL ENGINEER

The Kansas City District is recruiting for a Mechanical Engineer, GS-0850-13, with duty location in the District office in downtown Kansas City, Missouri. I am requesting your assistance to ensure maximum distribution of this announcement to those engineers who may be interested in this opportunity.

Announcement Number GH00A3041
OPENS: 8 February 2000
CLOSES: 7 March 2000

Mechanical Engineer, GS-830-13
Engineering and Construction Division
Design Branch, Facility Support Section
Area of consideration all status candidates.

To view and/or print the text of this announcement, go to web site (http://www.cpol.army.mil), click on Employment, Army's Vacancy Announcements, enter the announcement number and follow the instructions of the announcement to print and/or apply.

POC: BILL ZANER, CENWK-EC, 816-983-3178

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Dam Safety

CORPS MEETING AT ICODS TECHNICAL SEMINAR NO.7, SPILLWAY GATES

On Wednesday evening (23 February 2000), in conjunction with the ICODS seminar in Emmitsburg, Maryland, there will be a special meeting of all USACE personnel attending that seminar. This meeting will give you an opportunity to discuss your needs and concerns on gate-related technical guidance and research and development efforts. If you are registered to attend the ICODS seminar, you should receive an electronic message with additional information on this meeting.

POC: ROBERT BANK, CECW-EP, 202-761-1660

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CALL FOR ABSTRACTS FOR DAM SAFETY 2000

ASDSO invites all persons interested in safety of dams to submit abstracts of papers to be considered for presentation at the ASDSO 17th Annual Conference. The Conference will be held September 26-29, 2000 at the Westin Hotel, Providence, Rhode Island. Engineers, geologists, hydrologists, dam owners, state, local, and federal officials, industry representatives and others working in the field of dam safety are invited to share their experiences in all aspects of dam safety. Conference presentations are scheduled for 30 minutes each. Authors may chose from, but are not limited to the following general subject areas: (Specific topics are suggested for guidance only).

- Hydrology & Hydraulics -- Such as risk analysis/assessment, paleohydrology, PMF/PMP, overtopping, and spillways.

- Geotechnical Issues -- Such as grouting, rock anchors, liquifaction, slope stability analysis/design, seismic issues, seepage, and instrumentation/monitoring.

- Emergency Preparedness -- Such as flood warning systems, EAP's, dambreak applications, and disaster mitigation.

- Dam Design & Rehabilitation -- Such as case studies in rehabilitation, (small dams case studies needed, including lessons learned), underwater operations, RCC, spillways, and instrumentation/monitoring.

- Dam Inspections -- Such as outlet works, radial gates, dam owner experiences and solutions, and inspection techniques.

- Removal of Dams -- Such as dam breach issues, innovative engineering and construction techniques, and environmental issues.

- Dam Safety Regulatory Programs -- State programs, federal programs, public relations, programs in other countries.

- Dam Owner Issues -- Lake management, environmental issues, shoreline erosion, remote operations, public awareness, and public safety at dams.

- Dam Construction -- Such as environmental issues, contractor experiences, spillways, instrumentation/monitoring, and general case studies.

- General Information/Multi-Category -- Such topics as computer applications, current technical research, and model testing.

Abstracts, one-page, single-spaced, must be submitted to ASDSO prior to the established deadline of March 1, 2000. Biographical sketches of all authors, maximum one-page, single-spaced, in paragraph form, must also accompany abstracts. No resumes will be accepted. Full mailing address and telephone numbers must be included with each biographical sketch. An application form should be attached to each abstract. The form is available for download at http://www.damsafety.org.

The Dam Safety 2000 Program Committee will review all submittals. The Board of Directors approves abstracts for inclusion in the conference program upon recommendation by the Program Committee. Announcements of selected papers will be made on April 23, 2000.

Full papers will be required for publication in the conference proceedings. Papers (limit 12 pages in length including photos and graphics) will be due on July 15, 2000. Further instructions for speaker preparation will be provided upon notification of a paper's acceptance.

Corps Engineering and Construction personnel who work with Dam Safety are encouraged to submit abstracts and papers for Dam Safety 2000.

POC: CHARLES PEARRE, CECW-EP, 202-761-4531

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VENTURA RESIDENTS PANICKED AFTER HEARING TEST SIREN

The following article appeared in the Sacramento Bee on 31 January 2000. The editor thanks John Nickell, Dam Safety Coordinator for sending it to HQUSACE. The article shows the importance of good communications when exercises are planned. The article is followed by some comments from the Bureau of Reclamation about the event. The inclusion of the article in this issue is for lessons learned purposes.

> *VENTURA, Calif. (AP) -- A test of a system to warn of a Casita Dam failure sent panicked residents rushing for higher ground, trampling fences and jamming streets.*
>
> *Police tested the system at around 6 p.m. Saturday. Residents within a nine-mile area of the Ventura River valley heard 11 blaring sirens and a voice from a loud speaker warning: "This is an emergency. Head for high ground. You have one hour."*

The warning was prefaced with another saying, "This is a test," but many people apparently did not hear it, Ventura County sheriff's Sgt. Larry Meyers said.

Worse, the warning message got stuck and kept replaying, said Jeff McCracken, a spokesman for the U.S. Bureau of Reclamation. Residents said it played for about 15 minutes.

Dee Peterson said people in the neighborhood threw blankets and belongings on their front lawns and into cars. "People were going crazy," Peterson said. "There were people in wheelchairs trying to roll down the hill, mothers pushing their babies like mad in strollers with blankets on top of their shoulders."

Emergency telephone lines were jammed with anxious callers, and police and sheriff's deputies were called out to help calm the panic.

Valiant Nims said his daughters were "freaking out" because they had to leave their cats and pet rats. "One of them wanted to bust a window to get back in the house. There was real panic around here," he said.

Radio and newspaper announcements of the test appeared last week. Future tests are scheduled for noon on the first Wednesday of April, July and October.

Comments from Bureau of Reclamation --

From David Eubank of the Bureau's Denver Service Center -- Not surprisingly, I noted that certain pertinent facts were absent in the Associated Press, Sacramento Bee and other media articles on this incident and felt that you might appreciate some additional information.

Because of the large population at risk below Casitas Dam, the emergency warning system was formulated, designed and installed as part of a multi-faceted effort to reduce the very real risks posed by Casitas Dam on an interim basis until permanent modification of the dam can be completed. This multi-faceted effort included temporary foundation dewatering wells to assist in dewatering the downstream liquefiable portions of the lower foundation alluvium, an enhanced 24-hour visual monitoring program, an enhanced earthquake reporting program and an emergency warning system to warn those potentially at risk, to increase warning time and to reduce evacuation time. These interim risk reduction actions are being undertaken to reduce the apparent risks until a permanent modification of the dam can be completed and are certainly not in lieu of a permanent modification.

The permanent modification of Casitas dam is currently underway and is scheduled for completion in late FY 2000 or early FY 2001.

The emergency warning system was designed and installed by ATI, a firm with considerable experience in these types of systems. The subject system has been subjected to 8 previous tests without incident. The earlier tests were initiated either from the dam site or the County Offices. The subject incident occurred when the test was initiated from the City Offices and the operator was unable to stop the system when the test was completed. The cause of this malfunction is currently under investigation and has yet to be determined.

Hopefully, the above will provide some additional insight into this incident and the purpose of the emergency warning system. If you have questions or want additional information, you may contact me at DEUBANK@do.usbr.gov.

From William Pennington of the Bureau's local field office -- I would note that we did have considerable advance notice including radio, TV, and flyers at many locations. We have had up to two public presentation a week over the last several months on the project and we do the outreach in English and Spanish.

This is a difficult area to reach people, as most don't read the paper, for instance. We have a very good local public relations firm under contract to help with outreach. We had the PR firm at the ready during the test to answer our hot line and our net address.

Needless to say, we need to find a way to ensure that the problem doesn't happen again.

Editor's Note -- This item is included for its lessons learned value since it is applicable to a number of Corps of Engineers flood reduction projects, both dams and levees.

POC: CHARLES PEARRE, CECW-EP, 202-761-4531

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Information

SPECIFICATIONS CONFERENCE

A Specifications Conference is scheduled for 29 February and 1 March 2000 in San Antonio, TX and a lot of changes have occurred since the last conference in 1994. The primary specification engineer from each district should plan to attend or send an alternate. Details on the conference have been mailed to all Corps offices. If you need information contact your MSC Committee representation or visit the TECHINFO web site.

POC: CHARLIE BALDI, CECW-EP, 202-761-8894

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ARMY FAMILY HOUSING PROGRAM INCREASES

After four years with only a few Army family housing MCA projects, Congress is again approving a number of projects. The program for FY00 is still relatively small, $43,000,000, but will increase significantly in FY01. In an effort to be pro-active CEMP-E and CEMP-M are working on the updating of the program criteria and business processes. ER 1110-3-104 has been simplified and is ready for signature. The Center of Standardization for Army Family Housing, U.S. Army Engineer District, Norfolk, is preparing the FY-00 revision of TI 801-02, Family Housing. The document will be the first comprehensive update of the management processes and design criteria in four years. In addition, USACE is currently working toward a partnering agreement with the Environmental Protection Agency to simplify the processes for making all Army housing Energy Star compliant. The revised TI will contain an appendix defining those processes. The criteria for Army family housing already substantially comply with Energy Star requirements.

POC: FRANK A. NORCROSS, CEMP-ED, 202-761-0881

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DOD WILL PARTICIPATE IN FEDERAL PRISON INDUSTRIES SELECT PROGRAM

Federal Prison Industries (FPI) issued an invitation to the federal design community to participate in a new initiative called the Select Program early in 1999. The Deputy Commander for Military Programs sent a memorandum on 5 April 1999, which called for program participants. In response to this letter, nine USACE districts with interior designers and two Army MACOM offered their services and received training on the program in July 1999.

The Select Program applies to FPI furniture and furnishing products. The major benefit of the program is that, after FPI identifies its expected market share each calendar year, customers and program participants can determine which projects or products will be purchased from FPI and which projects will be purchased from private sector vendors. Although the program is voluntary with FPI, the Department of Defense (DOD) services agreed to support it after negotiating a Memorandum of Agreement with FPI to address DOD concerns about service and program administration. The Senior Executive Board of the Tri-Service Committee on Unified Design Guidance signed the Memorandum of Agreement to Facilitate DOD Participation in the Select Program with Federal Prison Industries Chief Operating Officer, Steve Schwalb, on 5 January 2000. This agreement cleared the way for full DOD participation. DOD participation in the Select Program is expected to produce better working relationships with FPI and should reduce lost design effort associated with the current waiver process.

The Deputy Commander for Military Programs sent a second memorandum out on 14 January 2000, to implement the program. It went to USACE activities and MACOM. The memorandum included four enclosures, which outline the program parameters, requirements, obligations, and schedule.

1. USACE Interior Design points of Contact (25 January 2000) annotated to show Select Program Participants (SPP) and Select Program Alternate Participants (SPA), MACOM participants, and Select Program Managers for the Air Force and Navy.

2. Memorandum of Agreement between DOD and FPI to Facilitate DOD Participation in the Select Program, 5 January 2000.

3. FPI Revised Select Program Schedule, 22 December 1999.

4. Select Program Implementation Guidance for Army Participation, 7 January 2000.

The Army Select Program Manager has provided the list of SPP and SPA to FPI. FPI is scheduled to provide these participants their program numbers on 31 January 2000. Our first milestone is the providing of Program Year Projections to FPI on 15 February 2000. To make this program work for Army participants requires command and project management support. Although SPP and SPA will be the points of contact, project managers need to provide the data needed to develop Levels of Business Activity (LBA), and USACE activities must put in place business processes to ensure that data collection, assignment of projects against LBA, and tracking of projects is handled expeditiously and to the benefit of our customers. We are working toward full program implementation by 3 April 2000. Questions on the program should be referred to the appropriate DOD Select Program Manager listed below.

Army: Frank A. Norcross, R.A., IIDA, CEMP-ED, 202-761-0881, frank.a.norcross@hq02.usace.army.mil
Navy: Tony D. Hinson, HQ NAVFACENGCOM, 202-685-9168, hinsont@navfac.navy.mil
Air Force: Sandra Warner, IIDA, AFCEE/DCD, 210-356-9004, sandy.warner@hqafcee.brooks.af.mil

POC: FRANK A. NORCROSS, CEMP-ED, 202-761-0881

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TECHNICAL CRITERIA FOR DESIGN-BUILD ACQUISITION

Headquarters is assembling a team to develop a technical criteria document for Design-Build acquisitions. The objective is to develop a concise, user-friendly method of presenting the specific technical requirements that must appear in an RFP. This is planned as a fast track effort, producing a useable product by the end of the Fiscal Year.

This will be a multi-disciplinary, multi-functional effort and participation by many people will be required, especially from District and field offices with Design-Build experience. Many offices have already responded to a Headquarters request for knowledgeable points of contact. We will be requesting assistance from many of these experienced field members, on a cost reimbursable basis.

An initial brainstorming meeting between HQ staff and selected field office representatives was held on 25 January 2000. Attendance was impacted somewhat by a major unforecasted snowstorm, but all of the field representatives were present. Mark Grammer (CEMP-EC) collected the following positive suggestions.

1. The field does not want HQ direction that would be limiting or would interfere with methods that have already been developed and successfully implemented.

2. Some kind of design-build performance criteria development guide is desired.

3. A document with hotlinks to industry standards/specs would be very helpful.

4. Sharing design-build information across the Corps would be productive. This might include:
   - A design-build webpage at HQUSACE with links to the various districts.
   - Design-build on-line training with search capability to allow focus on areas of interest (i.e. acquisition, planning, RFP development, clauses, source selection and contract management).
   - Special criteria or specifications on design-build QA/QC.

5. Use a target or ceiling price in RFP's.

6. Address design-build cost estimating.

7. Share/develop information on indefinite delivery design-build contracts.

Bob Billmyre (CEMP-ED) is assigned the lead in this effort with Rick Dahnke (CEMP-ED) and Mark Grammer (CEMP-EC) as permanent members of the development team. Any suggestions or lessons-learned that could benefit this endeavor should be forwarded to the team.

Others federal agencies have expressed interest in joining this effort but discussions are still in preliminary stages.

POC: ROBERT BILLMYRE, CEMP-ED, 202-761-8623

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VALUE ENGINEERING GROWING THE CORPS, STRETCHING TAX DOLLARS

Kudos to CESAD/Savannah District's OVEST and to CEMVD/New Orleans District for partnering with/assisting other MSC/Districts. Representatives of New Orleans District and OVEST will brief, CENWD's Kansas City District, and CELRD's Huntington and Nashville Districts the week of 7 February on their recent Baton Rouge, Louisiana Combined Sewer Overflows/Sanitary Sewer Overflow success. They will also assist Nashville District in a meeting with the City of Nashville the same week. This effort is a solid, unselfish example of "One-Door-to-the-Corps" between four Divisions.

Thanks to Major Subordinate Commands and Districts for the following solid FY 99 VE results:

Category	Savings/Avoidance
Civil Works:	$ 103.7 million reported to OMB
Military:	$ 56.2 million reported to Army/Defense
Support for Others:	$ 107.7 million (reported by others)
Air Force	$ 4.8 million (reported by Air Force)
Total	$ 271.4 million

Southwestern Division/Fort Worth District recently attained significant VE success immediately following a charette. The installation accepted $2.5 million in recommendations on the $16.5 million Soldier Service Center at Fort Hood, Texas.

POC: MICHAEL HOLT, CEMP-EV, 202-761-8738

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A-E PERFORMANCE EVALUATION FORM

In the July 1999 E&C News, we told you that DD Form 2631, Performance Evaluation (Architect-Engineer), had been revised in April 1999 and that the revised form would be available through ACASS by December 1999. There has been a change in implementation. Planning is now underway to convert ACASS and CCASS to Internet-based systems in FY 2001. It was not considered cost-effective to make further changes to the current ACASS PC-based software to accommodate the revised form.

Hence, A-E evaluations will continue to be prepared on the November 1992 edition of the DD 2631 until the new Internet-based ACASS is fielded. The changes in the form were not that significant, so delaying its use does not materially impact the quality of our evaluations. Only one adjustment need be made in the use of the November 1992 form to reflect a key enhancement in the revised form. Two attributes were added to Block 17 for the Design/Engineering Phase: Innovative Approaches/ Technologies, and Implementation of Small Business Subcontracting Plan. If one or both of these attributes are pertinent to a contract, they should be evaluated in Block 20, Remarks.

We will keep you apprised on the upgrade of ACASS and CCASS.

POC: DON EVICK, CEMP-EC, 202-761-1053

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Architect's Forum

PUBLIC ARCHITECTS TRAINING WORKSHOP

The American Institute of Architects, the AIA Federal Agency Liaison Group, the AIA Government and Industry Affairs department, and the AIA Public Architects Professional Interest Area Knowledge Center are jointly sponsoring the first annual *Public Architects Training Workshop.* This daylong event is to be held on 3 May 2000 in conjunction with the AIA National Convention and Exposition, at the Pennsylvania Convention Center, Philadelphia, PA.

This unprecedented gathering of *public sector architects*, representing local, state, federal and foreign governments, will meet for the purpose of discussing mutual issues and concerns with the business, profession and practice of public architecture. The workshop program will offer nationally prominent speakers, interactive educational, and individual breakout sessions. Topics include the state of the public architect, project delivery and contracting methods, project financing (including public-private partnerships), applying sustainable design to public projects, physical security, and more.

Included in the workshop fee of $195.00 will be complimentary registration to the AIA National Convention and Exposition, 4-6 May 2000, which will focus on "Livable Communities for American's Future." The AIA convention provides an excellent forum for public/private networking, the privilege to attend any of the over 160 professional training seminars, and the opportunity to view the latest products, services and technologies of over 500 exhibitors.

To ensure a comprehensive and equally informative experience for all we are soliciting additional topics and recommendations. To this end we would like to hear from you as soon as possible but no later than 10 January 2000. Please respond to the workshop planning committee chairperson, Mr. Lawrence P. Delaney, AIA, at lawrence.p.delaney@usace.army.mil. Indicate the topic(s) you would like to see presented, and if you are interested in making a presentation or assisting in some manner with the workshop. The success of this important initiative is dependent on the full participation and support of all public architects.

For more information on the workshop, convention, and to register contact Mr. Stan Bowman, (202) 626-7461 or e-mail bowmans@aiamail.aia.org. Also visit AIA online at www.aiaonline.com and AIA Philadelphia at www.libertynet.org/aia.

In a related matter of great importance to public sector architects the AIA Board of Directors, at their December meeting, approved a recommendation to offer full-time government architects a 50% reduction in national dues and an exemption from the advertising assessment. Additionally, AIA will encourage state and local components to offer similar dues reductions. Ultimately, the proposal will be voted on at the convention in May.

POC: LAWRENCE P. DELANEY, AIA, CEMP-E, 202-761-1545

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Open Discussion and Comments

DESIGN-BUILD CONTRACTS SKEW STATISTICS

The following comment was received from Huntsville Engineering Center:

COMMENT:
"A thought occurred to me while reading Charlie's and Dwight's Notes, concerning the amount of contracted out A-E services. Surely, some of the pressure from industry is related to reduced MCP and O&M program funding. To aggravate this, the increasing share of design-build contracting may skew the statistics even more. We need to somehow capture the quantity of D-B contracts being planned or executed to get a more realistic view of actual design being performed by private industry. Just a thought."

RESPONSE:
"At the Design-Build PRB for MG Hunter back in the fall there was some data displayed regarding the extent of design-build use among the various MSC's. The data for the out-year programs showed a very low expectation for design-build use and it was recognized that this was not a very accurate picture. Unless there is to be a focused data call I don't expect the reliability rate to be much better yet. PM is aware of the problem with getting good data and hopefully, with command emphasis we will eventually get a better picture of what acquisition methods are currently being used and projected for use in future years."

POC: MARK GRAMMER, CEMP-EC, 202-761-0744

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(Editors' note: If you want to share your thoughts with our readers regarding a subject of general interest, send an email to the E&C News editor at charles.pearre@usace.army.mil. A synopsis of your comments will be published next time).

Editors' Notes

SUBSCRIBE TO ECNEWS

Engineering and Construction News uses a subscription list on the Corps List Server. The name of the list is LS-ECNEWS. The purpose of the list is to distribute the Civil Works and Military Programs Engineering and Construction community newsletter, *Engineering and Construction News*.

You can subscribe or unsubscribe to LS-ECNEWS by sending an e-mail message to majordomo@usace.army.mil with no subject line and only a single line of text in the message body. That single line of text should have the following format: **subscribe ls-ecnews** or **unsubscribe ls-ecnews**. The List Server system will automatically pick up your originating e-mail address from the message and add it to or delete it from the distribution list.

If you have any questions about the list server, see the List Server E-Mail Delivery System web page at http://eml01.usace.army.mil/other/listserv.html. Or you may contact either Denise Massihi or Charles Pearre if you have additional questions on the subscription list.

POC: CHARLES PEARRE, CECW-EP, 202-761-4531

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